

What is claimed is:

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1. A method for conserving power in operation of a radiotelephone, the method comprising:

determining an ambient light intensity, referred to as an "ALI", at a radiotelephone;

comparing the ALI value with a reference value ALI(ref);

when the ALI value is at least as large as the ALI(ref) value, causing a backlight associated with the radiotelephone to enter a sleep mode;

when the ALI value is less than the ALI(ref) value:

determining if at least one function in a selected group of radiotelephone functions is presently in use;

when no function from the selected group is presently in use, causing the backlight to enter the sleep mode;

when at least one function from the selected group is presently in use, turning on the backlight to a selected energy level and beginning to accumulate time under a selected timeout interval;

determining if at least one function from the selected group is still presently in use;

when at least one function from the selected group is still presently in use, resetting the beginning of the timeout interval;

when no function from the selected group is presently in use, continuing to accumulate time under the timeout interval, and determining if the timeout interval is completed; and

when the timeout interval is completed, causing the backlight to enter the sleep mode.

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2. The method of claim 1, further comprising choosing said selected backlight energy level to be a monotonically decreasing function of an intensity difference, $ALI(\text{ref}) - ALI$, when said ALI value is less than said reference value $ALI(\text{ref})$.

3. The method of claim 1, further comprising choosing said selected backlight energy level to be a monotonically decreasing function of an intensity ratio, $ALI/ALI(\text{ref})$, when said ALI value is less than said reference value $ALI(\text{ref})$.

4. The method of claim 1, further comprising providing an adjustment to a user-specified value of at least one of said reference value $ALI(\text{ref})$ and a selected power level provided for said backlight.

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5. The method of claim 4, further comprising:
storing said user-specified value; and
providing said adjustment to said user-specified value of said at least one of said reference value $ALI(\text{ref})$ and said selected power level provided for said backlight, upon receipt of a keystroke sequence that identifies said user.

6. The method of claim 4, further comprising providing a selected default value for said at least one of said reference value $ALI(\text{ref})$ and said selected power level provided for said backlight.

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7. A system for conserving power in operation of a radiotelephone, the system comprising:

a light sensor that determines an ambient light intensity, referred to as an "ALI", at a radiotelephone; and

a computer that is programmed:

to compare the ALI value with a reference value ALI(ref);

when the ALI value is at least as large as the ALI(ref) value, to cause a backlight associated with the radiotelephone to enter a sleep mode;

when the ALI value is less than the ALI(ref) value:

to determine if at least one function in a selected group of radiotelephone functions is presently in use;

when no function from the selected group is presently in use, to cause the backlight to enter the sleep mode;

when at least one function from the selected group is presently in use, to turn on the backlight to a selected energy level and to begin to accumulate time under a selected timeout interval;

to determine if at least one function from the selected group is still presently in use;

when at least one function from the selected group is still presently in use, to reset the beginning of the timeout interval;

when no function from the selected group is presently in use, to continue to accumulate time under the timeout interval, and to determine if the timeout interval is completed; and

when the timeout interval is completed, to cause the backlight to enter the sleep mode.

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8. The system of claim 7, wherein said computer is further programmed to choose said selected backlight energy level to be a monotonically decreasing function of an intensity difference, $ALI(\text{ref}) - ALI$, when said ALI value is less than said reference value $ALI(\text{ref})$.

9. The system of claim 7, further wherein said computer is further programmed to choose said selected backlight energy level to be a monotonically decreasing function of an intensity ratio, $ALI/ALI(\text{ref})$, when said ALI value is less than said reference value $ALI(\text{ref})$.

10. The system of claim 7, wherein said computer is further programmed to provide an adjustment to a user-specified value of at least one of said reference value $ALI(\text{ref})$ and a selected power level provided for said backlight.

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to store said user-specified value; and

to provide said adjustment to said user-specified value of said at least one of said reference value $ALI(\text{ref})$ and said selected power level provided for said backlight, upon receipt of a keystroke sequence that identifies said user.

12. The system of claim 10, wherein said computer is further programmed to provide a selected default value for said at least one of said reference value $ALI(\text{ref})$ and said selected power level provided for said backlight.

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13. A method for conserving power in operation of a radiotelephone, the method comprising:

determining an ambient light intensity, referred to as an "ALI", at a radiotelephone and comparing the ALI value with a reference value ALI(ref);

causing a backlight associated with the radiotelephone to enter a sleep mode when at least one of the following two conditions is present: (i) the ALI value is at least as large as the ALI(ref) value and (ii) no function from a selected group of radiotelephone functions is activated within a selected timeout interval having a selected timeout length; and

when at least one function from the selected group is presently activated, turning on the backlight to a selected energy level, beginning to accumulate time, and comparing the accumulated time with the timeout value.

14. The method of claim 13, further comprising choosing said selected backlight energy level to be a monotonically decreasing function of an intensity difference, $ALI(ref) - ALI$, when said ALI value is less than said reference value ALI(ref).

15. The method of claim 13, further comprising choosing said selected backlight energy level to be a monotonically decreasing function of an intensity ratio, $ALI/ALI(ref)$, when said ALI value is less than said reference value ALI(ref).

16. The method of claim 13, further comprising providing an adjustment to a user-specified value of at least one of said reference value ALI(ref) and a selected power level provided for said backlight.

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17. The method of claim 15, further comprising:

storing said user-specified value; and

providing said adjustment to said user-specified value of said at least one of said reference value ALI(ref) and said selected power level provided for said backlight, upon receipt of a keystroke sequence that identifies said user.

18. The method of claim 16, further comprising providing a selected default value for said at least one of said reference value ALI(ref) and said selected power level provided for said backlight.

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